

The Substantial Burden of Acute Diarrheal Illness in the United States: A Running Total, FoodNet, 1998-1999

Imhoff B, Hadler J, Morse D, Shiferaw B, Vugia D, Medus C, Lance-Parker S, Karchmer T, Van Gilder T, the EIP FoodNet Working Group

Background: Diarrheal diseases impose a significant health burden on the U.S. population. A population-based study within the Emerging Infections Program's FoodborneDiseases Active Surveillance Network (FoodNet) conducted in 1996-1997 estimated 0.75 episodes of acute diarrheal illness per person per year in the United States. To assess trends in the burden of and risk factors for acute diarrheal illness, we conducted a similar survey in 1998-1999.

Methods: The FoodNet 1998-1999 population-based survey was administered within the FoodNet catchment area, which represented approximately 11% of the United States population. Randomly selected individuals in the California, Connecticut, Georgia, Maryland, Minnesota, New York, and Oregon FoodNet catchment areas were interviewed by telephone using a random digit dialing, single stage sampling method (Genesys-m). For this analysis, acute diarrheal illness was defined as three or more loose stools within 24 hours and either a duration greater than 1 day or diarrhea that resulted in impaired activity (e.g., missing work or school). Data describing diarrheal illness were analyzed using weighted proportions to compensate for unequal probabilities of selection, created based on 1998 projected census numbers.

Results: In the 12-month study period 12,755 persons were interviewed; 12,075 persons without a chronic diarrheal illness were included in this analysis. Six percent of respondents reported having an acute diarrheal illness within 4 weeks before the interview (0.83 episodes per person per year). Of the persons with acute diarrheal illness, 55% had stomach cramps, 37% vomited, 39% had fever and 6% had blood in their stool. Twenty-two percent of persons with acute diarrheal illness visited a doctor or other medical person. Among ill respondents who visited a doctor, 19% were asked to provide a stool sample; 97% complied with this request. Eleven percent of the persons with diarrheal illness who visited a health care provider were hospitalized overnight.

Conclusion: Projecting our results to the United States, an estimated 225 million episodes of acute diarrheal illness occurred nationally in the 1-year study period. Over 48 million persons visited a doctor, 6 million had a stool specimen tested, and 5 million were hospitalized at least overnight. Although the rate of acute diarrheal illness, when compared with 1996-1997 FoodNet estimates, has remained relatively constant, diarrheal illness continues to impose a considerable burden on both the population and the health care system. Further studies are ongoing to determine the cause-specific burden of acute diarrheal illness in the United States and to identify preventable risk factors.

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